

**ADVERTISEMENT FOR ENGINEERING AND RELATED SERVICES
MARCH 4, 2021**

ADDENDUM NO. 1, MARCH 8, 2021

**CONTRACT NO. 4400021121
CROSS BAYOU BRIDGE REPLACEMENT
STATE PROJECT NO. H.000413
F.A.P. NO. H000413
ROUTE US 71
CADDO PARISH**

Under the authority granted by Title 48 of Louisiana Revised Statutes, the Louisiana Department of Transportation and Development (DOTD) hereby issues this advertisement for consulting firms to provide engineering and related services. **Consultants who are a Louisiana or foreign LLC or corporation should be appropriately registered with the Louisiana Secretary of State, as contemplated by Title 12 of the Louisiana Revised Statutes, and with the Louisiana Professional Engineering and Land Surveying (LAPELS) Board under its rules for firms. If a consultant is not in good standing in accordance with those provisions, it may be subject to consequences contemplated in Title 12 and/or the LAPELS rules. All requirements of LAPELS must be met at the time the proposal is submitted. Prime consultants must be registered with the Louisiana Secretary of State and the Federal Government, using SAM.gov, prior to contract execution.**

One (1) proposal will be selected for each contract solicited per this advertisement. Only one (1) DOTD Form 24-102 proposal is required for this advertisement, and it represents the prime consultant's qualifications and those of any and all sub-consultants proposed to be used for the referenced contract(s). All identifying contract number(s) should be listed in Section 2 of the DOTD Form 24-102.

Any questions concerning this advertisement must be sent in writing to DOTDConsultantAds80@la.gov no less than 48 hours (excluding weekends and holidays) prior to the proposal deadline.

SCOPE OF SERVICES

The general tasks to be performed by the consultant for this contract are described more specifically in Attachment A, which is incorporated herein by reference.

The consultant shall perform the work in accordance with the requirements of this advertisement and the resulting contract. Deliverables shall be in such format as required in Attachment A. The work performed by the consultant shall be performed in a manner consistent with that degree of care and skill ordinarily exercised by members of the same profession currently practicing under similar circumstances.

MINIMUM PERSONNEL REQUIREMENTS (MPRs)

The requirements set forth in Attachment B must be met at the time the proposal is submitted.

EVALUATION CRITERIA

The criteria to be used by DOTD in evaluating responses for the selection of a consultant to perform these services are listed below:

1. firm experience on similar projects, weighting factor of three (3);
2. staff experience on similar projects, weighting factor of four (4);
3. firm size as related to the project magnitude, weighting factor of three (3);
4. past performance on similar DOTD projects, weighting factor of six (6)*;
5. current work load with DOTD, weighting factor of five (5);
6. approach and methodology, weighting factor of nine (9).**

*The consultant is to identify in the table below those evaluation disciplines consistent with the approach and methodology proposed in Section 19 of the DOTD Form 24-102.

** The Approach and Methodology should address all Stages; however, the main Approach and Methodology focus should be on Stage 3: Design.

THE FOLLOWING TABLE MUST BE COMPLETED AND INCLUDED IN SECTION 12 OF THE DOTD FORM 24-102 PROPOSAL.

<p>Sub-consultants are allowed to be used for this proposal. Fill in the table by identifying only those evaluation disciplines consistent with the approach and methodology proposed in Section 19 of the DOTD Form 24-102*, the name of each firm that is part of the proposal, and the percentage of work in each past performance evaluation discipline to be performed by that firm. The percentage estimated for each evaluation discipline is for evaluation purposes only and will not control the actual performance or payment of the work. The percentages for the prime and sub-consultants must total 100% for each past performance evaluation discipline, as well as the overall total percent of the contract. (Add rows as needed)</p>							
Evaluation Discipline(s)	% of Overall Contract	Prime	Firm B	Firm C	Firm D	Firm E	Firm F
Identify the percentage of work for the overall contract to be performed by the prime consultant and each sub-consultant.							
Percent of Contract	100%						

The past performance evaluation disciplines are: Road, Bridge, Traffic, CE&I/OV, Geotech, Survey, Environmental, Data Collection, Planning, Right-of-Way, CPM, ITS, Appraiser and Other. The crosswalk from the old categories to the new categories can be found at the link below:

http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/CCS/General%20Information/CPFR%20Crosswalk%20to%20New%20Evaluation%20Disciplines.pdf.

If sub-consultants are allowed, the prime consultant can perform less than 50% of the work, but none of the sub-consultants can perform a larger percentage of the overall contract than the prime consultant.

Proposals will be evaluated as set forth in the “Evaluation Criteria” section of this advertisement. The evaluation will be by means of a point-based rating system. Each of the above criteria will receive a rating on a scale of one (1) through five (5). The rating will then be multiplied by the corresponding weighting factor. The rating in each category will then be added to arrive at the proposal’s final rating.

DOTD’s Project Evaluation Team (PET) will be responsible for performing the above described evaluation, and will present a shortlist of the three (3) (if three are qualified), highest rated consultants to the Secretary of DOTD. The Secretary will make the final selection.

COMPLIANCE WITH SUPPLEMENTAL ETHICS REQUIREMENTS

DOTD has established supplemental ethics requirements applicable to consultants and PET members. These requirements are found in the “Supplemental Ethics Requirements” article of the sample contract linked to this advertisement, which are incorporated herein by reference. Any firm that is found to have violated these requirements may not be considered for this selection.

By submission of a proposal to perform services pursuant to this advertisement, the consultant agrees to comply with DOTD’s Supplemental Ethics Requirements.

RULES OF CONTACT UPON ADVERTISEMENT

DOTD is the single source of information regarding the contract selection. Any official correspondence will be in writing, and any official information regarding the contract will be disseminated by DOTD’s designated representative via the DOTD website. The following rules of contact will apply during the contract selection process, commencing on the advertisement posting date and ceasing at the time of final contract selection. Contact includes face-to-face communication, the use of a telephone, facsimile, electronic mail (email), or formal or informal written communications with DOTD. Any contact determined to be improper, at the sole discretion of DOTD, may result in the rejection of the proposal (i.e., DOTD Form 24-102).

Consultants and consultant organizations shall correspond with DOTD regarding this advertisement only through the email address designated herein; DOTDConsultantAds80@la.gov and during DOTD sponsored one-on-one meetings.

No consultant, or any other party on behalf of a consultant, shall contact any DOTD employee, other than as specified herein. This prohibition includes, but is not limited to, the contacting of: department, office, or section heads, project managers, members of the evaluation teams, and any official who may participate in the decision to award the contract resulting from this advertisement.

DOTD will not be responsible for any information or exchange that occurs outside the official process specified above.

By submission of a proposal to perform services pursuant to this advertisement, the consultant agrees to the communication protocol herein.

PROJECT TIME

The overall time for the completion of the scope of services is estimated to be **2500 days, with completion for the Stage 0 services is estimated to be 350 days.**

COMPENSATION

The estimated compensation payable to the consultant for all services rendered in connection with this contract shall be **\$2,100,000**. This estimate will be used for grading purposes only. Actual compensation will be determined by DOTD based on work hours negotiated between DOTD and the selected consultant. Within fifteen (15) calendar days of notification of selection, a kick-off meeting will be held with the selected consultant and appropriate DOTD personnel. The selected consultant will be required to submit a work hour proposal within thirty (30) calendar days following the notification of selection. All negotiations must be completed within the timeframe set forth in the Consultant Contract Services Manual.

Payment will be made based on lump sum.

The estimated compensation for Stage 0 services for is **\$316,333**.

DIRECT EXPENSES

To the extent that the consultant is allowed to claim reimbursement for direct expenses, all direct expense items that are not paid for in the firm's indirect cost rate and are needed and will be consumed during the life of the contract must be identified by the consultant during contract development. Standard equipment or resources to be used in the provision of services rendered for this contract will not be considered for payment under direct expenses.

The consultant should own most of the equipment required to provide the work and services. The cost of this equipment should be included in the consultant's indirect cost rate. Equipment may be considered "specialized" if it cannot be considered standard equipment for that particular consultant's normal operating business needs. If a consultant believes special equipment is needed for the contract, the consultant must inquire through the Question and Answer process, as provided herein, whether the identified item will be considered specialized equipment for the individual contract.

All travel related expenses will be compensated under direct expenses, and will be in accordance with the most current Louisiana Office of State Travel regulations as promulgated in the Louisiana Administrative Code under the caption "PPM No. 49", with the exception that compensation for

vehicle usage will be based on actual miles traveled directly and exclusively related to project needs. Vehicle rental rates will require prior approval from the PM.

QUALITY ASSURANCE/QUALITY CONTROL

The Scope of Services provided in Attachment A includes design of one (1) or more bridges and/or component parts thereof. The prime consultant shall submit a bridge design QA/QC plan document specifically developed for this contract as part of the DOTD Form 24-102. The QA/QC plan document must comply with the minimum requirements in the DOTD Bridge Design Section Policy for QA/QC as stated in Part I, Chapter 3 of the DOTD Bridge Design & Evaluation Manual (BDEM). The grading instructions, the rating matrix, and the grading sheet for the QA/QC plan document are included in Appendix G of the BDEM Part I, Chapter 3 – Policy for QA/QC. The QA/QC plan document shall be prepared to address all evaluation criteria included in the rating matrix. The QA/QC plan document must be implemented for all bridge design activities in both design phase and construction support phase of the contract. The prime consultant is fully responsible for QA/QC of their work as well as the work of all sub-consultants. All contract proposals must include a QA/QC certification that the proposals meet the requirements of the QA/QC plan document. Attach the QA/QC plan behind Section 22 of the DOTD Form 24-102.

If Attachment A includes specific QA/QC requirements that contradict those set forth above, the requirements in Attachment A control.

TRAFFIC ENGINEERING PROCESS AND REPORT TRAINING REQUIREMENTS

As part of DOTD's on-going commitment to high quality traffic engineering reports, a traffic engineering training course must be taken by traffic engineering PEs and EIs in order to be eligible to work on DOTD projects. When traffic is included as a discipline on which past performance is evaluated, for consultants performing traffic engineering services (i.e., traffic analysis throughout all DOTD project stages and/or QC of traffic analysis), appropriate personnel must successfully complete the three (3) modules of the Traffic Engineering Process and Report Course offered by Louisiana Transportation Research Center (LTRC). This Course must be completed no later than the time the proposal is submitted. **Copies of training certificates are to be included in Section 22 of the proposal.** It will be the prime consultant's responsibility to ensure their staff and sub-consultants complete the training. Copies of training records may be obtained from the LTRC website <https://registration.ltrc.lsu.edu/login>.

WORK ZONE TRAINING REQUIREMENTS

As part of DOTD's on-going commitment to work zone safety, required work zone training courses must now be taken every four (4) years in order for personnel to remain eligible to work on DOTD projects. For consultants performing preconstruction services (e.g., design, survey, subsurface utility, geotechnical, traffic, bridge inspection, environmental services), appropriate personnel must successfully complete these courses. In general, the person in responsible charge of traffic control plans shall be required to have Traffic Control Supervisor training. For preconstruction field services performed within the clear zone, at least one (1) member of the field

crew shall have Traffic Control Supervisor or Traffic Control Technician training. The consultant should identify all personnel listed in the staffing plan for the contract who have completed the appropriate work zone training courses. All preconstruction work zone training requirements shall be met **prior to contract execution**. It will be the prime consultant's responsibility to ensure their staff and sub-consultants have the appropriate work zone training.

In addition to the above requirements, if the Scope of Services set forth in Attachment A includes Construction Engineering and Inspection (CE&I), the following training requirements shall be met **at the time the proposal is submitted**:

Field Engineers:	Traffic Control Technician Traffic Control Supervisor Flagger
Field Engineer Interns:	Traffic Control Technician Traffic Control Supervisor Flagger
Field Senior Technicians, Survey Party Chiefs, and SUE Worksite Traffic Supervisors*:	Traffic Control Technician Traffic Control Supervisor Flagger
Other Field Personnel*:	Traffic Control Technician Flagger

* excluding Asphalt Plant Inspector, Paint Managers, and Paint Inspectors

Approved courses are offered by ATSSA and AGC. Substitutes for these courses must be approved by the DOTD Work Zone Task Force. For more information, please contact DOTD HQ Construction at 225-379-1584. Specific training course requirements are:

Flagger:	Successful completion every four (4) years of a work zone flagger course approved by the Department. The "DOTD Maintenance Basic Flagging Procedures Workshop" is not an acceptable substitute for the ATSSA and AGC flagging courses.
Traffic Control Technician (TCT):	Successful completion every four (4) years of a work zone traffic control technician course approved the Department. After initial successful completion, it is not necessary to retake this course every four (4) years if Traffic Control Supervisor training is completed every four (4) years.

Traffic Control Supervisor (TCS): Successful completion of a work zone traffic control supervisor course approved by the Department. Following an initial completion, traffic control supervisors must either complete a one (1)-day TCS refresher course or retake the original two (2)-day TCS course every four (4) years.

ATSSA contact information: (877) 642-4637

REFERENCES

All services and documents will meet the standard requirements as to format and content of DOTD and will be prepared in accordance with the latest applicable editions, supplements, and revisions of the following:

1. AASHTO Standards – <https://www.transportation.org/>
2. ASTM Standards – <https://www.astm.org/BOOKSTORE/BOS/index.html>
3. DOTD Test Procedures – http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/Materials_Lab/Pages/Menu_TPM.aspx
4. DOTD Location and Survey Manual – http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/LocationSurvey/Manuals%20and%20Forms/Location_and_Survey_Manual.pdf
5. Addendum “A” to the Location & Survey Manual – http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/LocationSurvey/Manuals%20and%20Forms/Location%20and%20Survey%20Manual%20-%20Addendum%20A.pdf
6. DOTD Roadway Design Procedures and Details – http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/Road_Design/Pages/Road-Design-Manual.aspx
7. DOTD Design Guidelines – http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/Road_Design/Memoranda/Minimum%20Design%20Guidelines.pdf
8. DOTD Hydraulics Manual – http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/Public_Works/Hydraulics/Documents/Hydraulics%20Manual.pdf
9. Louisiana Standard Specifications for Roads and Bridges – http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/Standard_Specifications/Pages/Standard%20Specifications.aspx
10. Manual on Uniform Traffic Control Devices (Non-DOTD Link) – <http://mutcd.fhwa.dot.gov/>
11. DOTD Traffic Signal Design Manual – http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/Traffic_Engineering/Traffic%20Control/Traffic%20Signal%20Manual%20V3%20-%20207.1.20.pdf

12. National Environmental Policy Act (NEPA)
13. DOTD Stage 1 Planning/Environmental Manual of Standard Practice - http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/Environmental/Pages/Stage_1.aspx
14. National Electrical Safety Code
15. National Electrical Code (NFPA 70)
16. A Policy on Geometric Design of Highways and Streets (AASHTO) – https://bookstore.transportation.org/collection_detail.aspx?ID=110
17. DOTD Construction Contract Administration Manual – http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/Pages/Engineering_Docs.aspx
18. DOTD Materials Sampling Manual – http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/Materials_Lab/Pages/Menu_MSM.aspx
19. DOTD Bridge Design and Evaluation Manual – http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/Bridge_Design/Pages/BDEM.aspx
20. Consultant Contract Services Manual – http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/CCS/Manuals/CCS%20Manual%20rev%20Oct%202020.pdf
21. Bridge Inspector’s Reference Manual – <https://www.fhwa.dot.gov/bridge/nbis.cfm>
22. Federal Aid Off-System Highway Bridge Program Guidelines – http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/Bridge_Design/Manuals/Other%20Manuals%20-%20Guidelines/2019%20Federal%20Aid%20Off-System%20Highway%20Bridge%20Program%20Guidelines.pdf
23. Code of Federal Regulations 29 CFR 1926 (OSHA)
24. Complete Streets – http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Multimodal/Highway_Safety/Complete_Streets/Pages/default.aspx
25. Traffic Engineering Manual - http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/Traffic_Engineering/Misc%20Documents/Traffic%20Engineering%20Manual.pdf
26. Traffic Engineering Process and Report – http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/Traffic_Engineering/ManualsPublications/Pages/TEPR.aspx
27. DOTD Bridge Design Technical Memoranda - http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/Bridge_Design/Pages/Technical-Memoranda.aspx
28. FHWA Geotechnical Engineering Circular 5 (GEC 5) - <https://www.fhwa.dot.gov/engineering/geotech/pubs/nhi16072.pdf>
29. DOTD Construction of Geotechnical Boreholes and Groundwater Monitoring Systems - http://www.dnr.louisiana.gov/assets/OC/env_div/gw_res/200010_GREENBOOK.pdf

30. LTRC Project No. 98-3GT: Evaluation of Bearing Capacity of Piles from Cone Penetration Test Data - <https://www.ltrc.lsu.edu/pdf/Pile-CPT-Final-Report.pdf>
31. FHWA Geotechnical Engineering Circular 10 (GEC 10) - <https://www.fhwa.dot.gov/engineering/geotech/foundations/nhi10016/nhi10016.pdf>

CONTRACT EXECUTION REQUIREMENTS

The selected consultant will be required to execute the contract within ten (10) days after receipt of the contract.

A sample of the contract provisions can be found at the following link: http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/CCS/Pages/Advertisements.aspx.

REVISIONS TO THE ADVERTISEMENT

DOTD reserves the right to revise any part of the advertisement by issuing addenda to the advertisement at any time. Issuance of this advertisement in no way constitutes a commitment by DOTD to award a contract. DOTD reserves the right to accept or reject, in whole or part, all DOTD Form 24-102s submitted, and/or cancel this consultant services procurement if it is determined to be in DOTD's best interest. All materials submitted in response to this advertisement become the property of DOTD, and selection or rejection of a proposal does not affect this right. DOTD also reserves the right, at its sole discretion, to waive administrative informalities contained in the advertisement.

CLARIFICATIONS

DOTD reserves the right to request clarification of ambiguities or apparent inconsistencies found within any proposal, if it is determined to be in DOTD's best interest.

PROPOSAL REQUIREMENTS

The consultant's proposal for this advertisement must be submitted by email to DOTDConsultantAds80@la.gov using the most current version of the DOTD Form 24-102 (available at http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/CCS/Pages/Manuals_Forms_Agreements.aspx). Hard copies of the consultant's proposal are not required. All proposals must be in accordance with the requirements of this advertisement, and the Consultant Contract Services Manual. Unless otherwise stated in this advertisement, copies of licenses and certificates are not required to be submitted with the proposal.

If more than one (1) contract is to be selected based on this advertisement, no prime consultant is allowed to be a sub-consultant on any other consultant's 24-102. If a prime consultant is submitted as a sub-consultant on another consultant's 24-102, its proposal as a prime consultant may be deemed non-responsive.

Any consultant failing to submit any of the information required on the DOTD Form 24-102, or providing inaccurate information on the DOTD Form 24-102, may be considered non-responsive.

DOTD employees may not submit a proposal, nor be included as part of a consultant's proposal.

Contract and/or part-time employees are allowed. Such employees should be shown in Section 15 of the DOTD Form 24-102 with an asterisk denoting their employment status.

The DOTD Form 24-102 should be identified with **contract number 4400021121 and/or State Project No. H.000413**, and must be received by DOTD via email **no later than 3:00 p.m. CST on Tuesday, March 23, 2021**.

ATTACHMENT A – SCOPE OF SERVICES

The project time is **typical**.
 The route classification is **NHS**.

The home office indirect cost rate shall be applicable to all services except as otherwise designated hereafter.

The selected consultant shall provide engineering and related services for replacement for the following structures:

Project Number	Recall Number	Latitude	Longitude	Existing Structure Type	Route	Crossing
H.000413	013500	32.518890	-92 <u>93</u> .750700	Steel I-Beam (rolled)	US 71	Cross Bayou
	013510	32.519200	-92 <u>93</u> .752700	Steel I-Beam (rolled)	US 71	Cross Bayou

The Consultant shall provide the following scope of engineering services:

STAGE 0: FEASIBILITY

Bridge Design Scope of Services

Task 1:

Prepare project design criteria in accordance with the latest versions of the following documents:

- AASHTO LRFD Bridge Design Specifications
- LADOTD Bridge Design Manuals
- LADOTD Bridge Design Technical Memoranda
- LADOTD Minimum Design Guidelines
- AASHTO Geometric Design of Highways and Streets

Task 2:

Review as-built plans, existing load rating reports, inspection reports, existing R/W, traffic data, parish maps, scaled aerial photos of site, DOTD roadway classification, Stage 0 Structural Site Surveys, and any other relevant and available information that would aid in providing the required submittals.

Task 3:

Conduct a field visit to the bridge sites, assess the site conditions (including environmental impacts, utility relocation, r/w impacts, permit issues, possible roadway detour alternatives and length of detour, existing approach roadway section and geometry, etc.), and have a reasonable understanding of the current health and serviceability of the existing structures. Determine how the existing conditions might cause constructability issues and affect possible construction

alternatives, such as phased bridge construction. Verify the findings of this field visit with the available bridge inspection and rating reports. If necessary, get input on the project from the local DOTD District, stakeholders, and permitting agencies.

Task 4:

Prepare bridge alignment alternatives such as but not limited to:

- Phased bridge construction
- Off-set bridge alignment
- Diversion bridge alignment
- Roadway closure alternative on existing alignment (Provide existing state routes to function as alternates)
- Cross-Over Alignment

Determine a list of bridges with estimated type, size (length and width) and location of each. Identify the possible risks associated with each alternative (railroad impacts, utility impacts, relocations, etc.) as well as identify alternates that are not feasible with justification. Prepare a parametric construction cost estimate (construction, r/w, utility relocation, engineering) (\$/ft²) for each structure and each alternative. Recommend an alternative to proceed onto plan development with justification. DOTD will make the final alternative selection.

Task 5:

Complete the following checklists for the selected alternate:

- Stage 0 Environmental Checklist
- Stage 0 Preliminary Scope and Budget Checklist.

Task 6:

Prepare and submit a comprehensive report with the findings.

Consultant Deliverables:

The following information shall be included as part of the project submittal in both hardcopy and electronic (word and pdf):

- Design Criteria
- Summary of the analysis results from Tasks 2 and 3
- Summary of all alternatives and bridges including bridge type, size (length and width), location, a discussion on the designability, associated risks, and constructability of each alternative. Identify alternates that are deemed not feasible with justification.
- Cost estimate for each structure and each alternative
- Recommendation on the preferred alternative for each structure
- Appendix of Bridge information including field visit photos and any background information used in the project
- Aerial showing recommended limits of survey and location and recommended level of subservice utility engineering.
- Completed Stage 0 – Preliminary Scope and Budget Checklist
- Completed Stage 0 – Environmental Checklist

The Consultant shall provide personnel to attend meetings with DOTD team members, sub-consultants, and appropriate agency stakeholders to facilitate development of the project or at the direction of the DOTD project manager.

All work shall be performed in accordance with all applicable DOTD policies, procedures, and manuals. Design criteria shall be developed and submitted to the Project Manager for review and approval prior to proceeding with design.

Traffic Study Scope of Services

This scope of work is to determine the most optimum traffic network for the Cross Bayou Bridge replacement. The Consultant shall perform and coordinate a traffic study to analyze the existing and projected future conditions for operational and safety issues, and to develop reasonable design concepts that mitigate those issues. Concepts shall be developed in sufficient detail to determine geometric feasibility of the proposed improvements and anticipated right of way (ROW) needs. The traffic analysis study shall be performed in accordance with all Louisiana Department of Transportation and Development (DOTD) guidelines and policies, including but not limited to the Traffic Engineering Process and Report guidelines, Complete Streets Policy, Engineering Directives and Standards Manual (EDSM), Highway Safety Manual (HSM), DOTD's Design Guidelines and other relevant design manuals and guidelines that can be found on DOTD's website (www.dotd.la.gov).

Kickoff Meeting

The purpose of this meeting is to establish the foundation for continued coordination, develop a mutual understanding of the deliverables, agree on the procedures to follow, and discuss the Measures of Effectiveness (MOEs) to be compared for analyses. Any requests or exchange of information from either party necessary to complete the scope of services should be done at this meeting.

Deliverables:

1. Agenda – submitted to DOTD one week prior to meeting
2. Meeting Minutes – submitted within 3 days

Task 1.0 - Initial Data Collection

The Consultant shall adhere to all guidelines and industry standards in capturing data used for analysis.

One (1) 7-day 24-hour bidirectional count with classification shall be taken along US 71 between N Common St and Cadillac St. These counts shall be used to determine the peak periods for analysis.

Task 1.0 Deliverables:

1. Appendix A – Initial Data Collection
 - a. Electronic submittal of the 7-day 24-hour raw counts. The count locations shall be shown on an aerial map.
 - b. Explanation of count discrepancies (if applicable)

- c. Peak Period Determination Chart with explanation
- d. QA/QC Checklist and Documentation – signed and dated (hard copy)

Task 2.0 - Final Data Collection

The Consultant shall adhere to all guidelines and industry standards in capturing data used for analysis.

Peak period and 48 hour classification counts (24 hour classification counts will be acceptable). The goal is to have a 24 hour count with classification at the same time peak period TMC's with classifications and demand are performed. Please note to count all movements including vehicular, pedestrian and bicycle. We will assume for purposes of negotiations that only AM and PM peak periods will be analyzed.

Location of peak period counts:

- 1. Market St at Caddo St
- 2. N Spring St at Caddo St
- 3. Airport Dr at N Spring St
- 4. N Market St at Cadillac St

Task 2.0 Deliverables:

- 1. Appendix B – Final Data Collection
 - a. Growth Rate Determination – Justification of growth rate determination (hard copy)
 - b. Any documentation, justifications, explanations for any count discrepancies (hard copy). All locations shall be correct and easily followed.
 - c. Volume Check – Provide raw count figures with volume differences. These figures are not adjustments for volume balancing. If more than 10 percent off provide explanation or recount
 - d. Raw Turning Movement Counts (TMCs) with classification and 48 hour counts with classification (includes vehicle and non-vehicle movements).
 - e. Demand Calculation Table
 - f. Maps (hard copy)
 - a. Raw Turning Movement Counts (TMCs) shown separately with unmet demand
 - b. Final Existing Volumes
 - c. No Build Volumes (grown 20 years)
 - d. Final Build Volumes
 - g. Peak Period Observations (shall include but not limited to capturing railroad activity, pedestrian activities that are not captured by the TMCs, the use of nearby driveways, etc)
 - h. Geometric Field Checks (This is for calibration and design decisions, not to provide as-builts)
 - i. QA/QC Checklist and Documentation – signed and dated (hard copy)
- 2. Chapter 1

The data collection chapter shall clearly identify the methodology and analysis of the multi-stage process of collecting traffic data for evaluating existing and future conditions within the study area. Deliverables submitted during data collection for approval and advancement to the next stage should be included as sections within Appendix A: Data Collection.

- Explanation of the methodology for collecting data including the type of counts, study area information, etc.
- State the peak period for the corridor as well as the peak hour (AM and PM). Is a corridor peak being established for the study area or are there intersections that produce a secondary peak along the corridor? Is the peak on a standard Tuesday, Wednesday, or Thursday or is the peak experienced on the weekend? Is there a school, chemical plant, large commercial generator, etc. that is outside of the peak period?
- Summary of how the growth rate was determined and the growth rate(s) to be used.

Task 3.0 - Existing Safety Analysis

The Consultant shall read and analyze the 2016-2018 crash reports. This is approximately 148 crash reports. DOTD will provide a copy of the CATSCAN analysis.

Task 3.0 Deliverables: (to be submitted with Task 4.0)

1. Appendix C – Existing Safety Analysis
 - a. Written Crash Analysis Summary
 - b. Crash Report Documentation
 - c. Collision Diagram – hard copy
 - d. QA/QC Documentation

Task 4.0 – Existing/No Build Traffic Analysis and Preliminary Tier 1

The existing and no build network shall use HCS7 for analysis. A multi-period analysis of all locations is required and shall include the following MOEs per movement: queue lengths per movement per lane, v/c ratio per movement per lane, and control delay per movement per lane. HCM Analysis results must be verified with the collected field data to ensure validity and accuracy. All defaults must be justified and documented.

DOTD will coordinate with the designer on the possible alternatives for the bridge replacement to aid in the development of the Tier 1.

Task 4.0 Deliverables:

1. Appendix D – Existing and No Build Analysis
 - a. Software Reports/Output for Existing and No Build Conditions of Intersections and segments (These reports should have the inputs and MOE's. Do not print out every report on every page. Only the relevant ones.)
 - b. Documentation of Inputs
 - c. Raw electronic software files of analyses
 - d. Analysis results of MOE's on map with road name, control type, queues and north arrow of the entire corridor (11 x 17)
 - e. Queue maps of intersections (both field-observed and software results – if there is a difference, explain)
 - f. Intersection description (for each TMC intersection)
 - i. A detailed description “paint a picture” of intersection, nearby land use and issues for those who are not familiar with the area

- ii. Aerial of intersection showing existing lane configuration, peak hour TMC's, commercial/residential drives and any other notable feature such as but not limited to bus stops, crosswalks, train crossings etc.
 - iii. Peak Period Observation Summary
 - iv. Summary of Crash History (Appendix C)
 - v. MOE Table of Results
 - g. QA/QC Documentation
 - h. 11 x 17 Map(s) showing redistributed future year volumes
- 2. Preliminary Tier 1 (For Meeting)
 - a. Summary of Screening Criteria
 - b. Critical Intersection Type Matrix and Results
 - c. Any additional tools & outputs used in decision-making process (e.g., CAP-X)
- 3. Chapter 2

The Existing and No Build analysis chapter is the foundation of the report and provides the base against which alternatives are compared. Judgment is necessary to identify meaningful implications of issues per intersection or segment, as well as its interconnectedness within the study area. Information provided should clearly present all existing or future issues of operation and/or safety without lengthy and complicated descriptions. Though areas of no concern may not be impactful, they must still be addressed and documented. Identification and justification of the study area's needs, capacity, safety concerns and overall performance in this chapter will be used to justify Tier 1 alternatives.

Task 5.0 - Existing and No Build Network Review Meeting

The Consultant shall conduct a meeting with all parties.

- A. Present and discuss Chapter 2: Existing and No Build, including any safety or capacity issues for the study area
- B. Present and discuss high-level alternatives that address issues found in Chapter 2 (Preliminary Tier 1 results)
- C. Discuss tool selection for Alternative Analysis

Task 5.0 Deliverables:

Meeting Minutes submitted within 3 days

Task 6.0 - Preliminary Tier 2 Analysis

- A. Footprint layouts on an aerial of the potential alternatives at critical areas showing high-level physical impacts along the corridor. (Not a full conceptual, that will be after task 1.8) CADD is not required.
- B. Meeting (Optional)
- C. Recommend weight factors and ratings scale for the Alternative Comparative Evaluation Matrix

Task 6.0 Deliverables:

- 1. Meeting Minutes submitted within 3 days (if applicable)
- 2. High Level Sketches and Analysis
- 3. Proposed Alternative Comparative Evaluation Matrix to be used in alternative analysis

Task 7.0 - Final Alternative Analysis

Tier 2 Analysis using approved software from the Existing and No Build meeting. Analyze only future year.

Task 7.0 Deliverables:

All data should be submitted via electronic copy. Hard copies noted below are additional:

1. Appendix E - Alternative Analysis
 - A. Tier 1 Matrix with documentation.
 - B. Tier 2 Analysis and Documents
 1. 11 x 17 Map(s) showing queues on an aerial comparing all alternatives and No Build alternative (hard copy and pdf)
 2. Electronic copy of Analysis for Operations
 3. Software Reports/Output for Analysis of Intersections – Only relevant reports with inputs and Measures of Effectiveness (MOE) are needed, not every page of every report available. (pdf)
 4. Intersection Summaries – each intersection with Turning Movement Counts (TMCs) and/or modifications
 - A detailed description of new and modified intersections (paint a picture)
 - Aerial of intersection showing proposed lane configuration, proposed and existing Right of Way (ROW), and proposed and existing Control of Access (COA).
 - Safety Analysis (showing existing crash diagram with alternatives drawn and the potential crashes that may be eliminated or added with that alternative)
 - MOE Table of Results compared to No Build and all other Alternatives
 5. Summary Table of Results compared to No Build and all other Alternatives
 6. Critical Geometry Layout (of entire corridor) (11X 17 hard copy(s), pdf and CADD files (not a line and grade))
 7. Design Guideline Report
 8. Documentation of any model changes from No Build to Alternative Analysis
 9. Comparative Evaluation Matrix with documentation and calculations
 - C. QA/QC documentation
2. Introduction of Final Report
3. Chapter 3
 - a. Summary of Tier 1 analysis
 - b. Summary of Tier 2 analysis including Alternative Comparative Evaluation
 - c. Study Area Network Overview

The summary, similar to the Existing Network, will include an overall description of the network for each peak period, and highlight the changes within the study area that address the issues identified in chapter 2. This may include specific references to Appendix E.
4. Executive Summary

Task 8.0 - Final Alternatives Analysis Meeting

The consultant shall conduct a meeting with all parties.

- A. Present and discuss Chapter 3

Task 8.0 Deliverables:

1. Meeting Minutes submitted within 3 days

Task 9.0 - Final Report

Task 9.0 Deliverables:

1. Sealed Report (*Two [2] hard copies and two [2] electronic copies*)

Additional Services

The scope of services, compensation and contract time for Stage 3: Design and Stage 5: Construction Related Engineering Services will be established by Supplemental Agreement(s):

STAGE 3: DESIGN

- Structural Design
- Roadway Design
- Drainage Design
- Geotechnical Engineering Design
- Geotechnical Investigation
- Environmental Documents, Permits, and Sketches
- Topographic Survey
- Preliminary Plans
- Final Plans
- As-Designed Bridge Rating
- Permanent and Temporary Signing
- TMP
- Engineer's Construction Cost Estimate
- Special Provisions and NS Items (if needed)
- Pre-bid Support Services

STAGE 5: CONSTRUCTION RELATED ENGINEERING SERVICES

- Construction Support/Construction Related Engineering
- Shop Drawing/Erection Drawing Review

SERVICES TO BE PERFORMED / ITEMS TO BE PROVIDED BY DOTD

If available, DOTD will provide the following information as applicable:

- Access to As-built plans if available
- Standard Plans and Special Details
- Access to Latest inspection reports
- Access to General Files for viewing available plans, details, and records

ELECTRONIC DELIVERABLES

Consultant hereby agrees to produce electronic deliverables in conformance with DOTD Software and Deliverable Standards for Electronic Plans document in effect as of the effective date of the most recent contract action or modification, unless exempted in writing by the Project Manager. Consultant is also responsible for ensuring that sub-consultants submit their electronic deliverables in conformance with the same standards. DOTD Software and Deliverable Standards for Electronic Plans document and DOTD CAD Standards Downloads are available via links on the DOTD web site.

Consultant shall apply patches to CAD Standard Resources and install incremental updates of software as needed or required. Consultant hereby agrees to install major updates to software versions and CAD Standard Resources in a timely manner. Major updates of CAD standards and software versions shall be applied per directive or approval of the DOTD Design Automation Manager. Such updates will not have a significant impact on the plan development time or project delivery date, nor will they require Consultant to purchase additional software. Prior to proceeding with plan development, Consultant shall contact the Project Manager for any special instructions regarding project-specific requirements.

In the event that any Digital Plan Delivery Standard conflicts with written documentation, including DOTD plan-development Manuals, the Digital Plan Delivery Standard governs. Consultant is responsible for contacting the Project Manager should questions arise.

Consultant shall upload (or check in) electronic deliverables directly into the DOTD ProjectWise repository at each plan delivery milestone. Consultants are responsible for performing certain operations at each milestone including, but not limited to, the following:

- Upload (or check in) CAD plan deliverables to the discipline “Plans” folder
- Apply and maintain indexing attributes to CAD plans (and other deliverables as needed)
- Publish PDF format plan submittals in ProjectWise using automated publishing tools
- Digitally sign PDF format plan submittals in ProjectWise according to DOTD standards and procedures (Final Plans, Revisions and Change Orders). Signatures shall be applied in signature blocks provided with electronic seals and Title Sheets.

Additionally, after reviewing deliverables for each submittal milestone, the Project Manager shall notify Consultant regarding the availability of two automatically-generated informational reports in ProjectWise. These reports document the completion status and other information regarding indexing attributes and CAD standards. Consultants shall take these reports into account and make any necessary adjustments to plans before the next submittal milestone; or sooner, if directed by the Project Manager.

ATTACHMENT B – MINIMUM PERSONNEL REQUIREMENTS (MPRs)

The following requirements must be met at the time the proposal is submitted:

1. At least one (1) principal of the prime consultant shall be a registered professional engineer in the state of Louisiana.
2. At least one (1) principal or other responsible member of the prime consultant shall be currently registered in the state of Louisiana as a professional engineer in civil engineering.
3. At least one (1) principal or responsible member of the prime consultant shall be a professional civil engineer, registered in the state of Louisiana, and shall have a minimum of five (5) years of experience in responsible charge of bridge design.
4. At least one (1) professional civil engineer, registered in the state of Louisiana, and shall have a minimum of ten (10) years of experience in using the Louisiana Standard Specifications for Roads and Bridges and the Louisiana DOTD Bridge Design Manuals.
5. .At least one (1) professional engineer, registered in the state of Louisiana, shall have a minimum of ten (10) years of design experience in reinforced concrete, prestressed concrete bridges, steel girder bridges, pile bents and column bents.
6. At least one (1) professional civil engineer, registered in the state of Louisiana, shall have a minimum of ten (10) years of experience in roadway design.
7. At least one (1) professional land surveyor, registered in the state of Louisiana, shall have a minimum of 5 years of experience in conducting topographic surveys.
8. At least one (1) professional civil engineer, registered in the state of Louisiana, shall have a minimum of ten (10) years of experience in the geotechnical design involving Louisiana soils and bridge structures.
9. At least one (1) laboratory manager shall have a minimum of five (5) years of experience in geotechnical laboratory testing.

MPRS ARE TO BE MET BY SEPARATE INDIVIDUALS OF THE PRIME CONSULTANT, UNLESS STATED OTHERWISE BELOW.

MPR Nos. 1 through 4 may be met by the same person.

MPR Nos. 5 through 9 must be met by separate individuals and may be satisfied through the use of a sub-consultant(s).

NOTE: WHEN SATISFYING A MINIMUM PERSONNEL REQUIREMENT, PLEASE ENSURE THE RÉSUMÉ REFLECTS REQUIRED EXPERIENCE AS REQUESTED.

- Please note the number of MPRs are minimal; however, all relevant personnel necessary to perform the Scope of Services must be identified in Section 15 of the DOTD Form 24-102 and their resumes included in Section 17 of the DOTD Form 24-102.
- When applicable, DOTD-certified inspector certifications must be submitted in Section 22 of the DOTD Form 24-102. Inspectors may only inspect activities in which they hold an active DOTD certification. (See DOTD Construction Contract Administration Manual)